



# Cerbec® SN103 Silicon Nitride

	Properties		Units	Performance
MECHANICAL	Density		g/cm <sup>3</sup>	3.23
	Crystal Size	Average	μm	< 1
	Water Absorption		%	0
	Gas Permeability			0
	Flexural Strength (MOR)	20 °C	MPa	1000
	Elastic Modulus	20 °C	GPa	290
	Poisson's Ratio	20 °C		0.27
	Compressive Strength	20 °C	MPa	3400
	Hardness		HV10	1490
	Fracture Toughness	ASTM F2094 IFR	MPa-m <sup>1/2</sup>	6
THERMAL	Thermal Conductivity	20 °C	W/m-K	14
	Coefficient of Thermal Expansion	25-1000 °C	1 X 10 <sup>-6</sup> /°C	3.6
	Specific Heat	100 °C	J/kg-K	650
	Thermal Shock Resistance	Δ T	°C	675
	Maximum Use Temperature		°C	1000
ELECTRICAL	Dielectric Strength	6.35 mm	ac-kV/mm	12
	Dielectric Constant	1 MHz, 25 °C		8.02
	Dielectric Loss (tan δ)	1 MHz, 25 °C		< 0.0004
	Volume Resistivity	25 °C	Ω-cm	> 10 <sup>14</sup>

The chart is intended to illustrate typical properties. Property values vary with method of manufacture, size, and shape of part. Data contained herein is not to be construed as absolute and does not constitute a representation or warranty for which CoorsTek assumes legal responsibility. CoorsTek and Cerbec are registered trademarks of CoorsTek, Inc.



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